MI SHA NEWS

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Walbridge Aldinger Partnership

Walbridge Aldinger and MIOSHA Launch Construction Partnership with the Goal of Zero Injuries for Workers

Walbridge Aldinger, the Michigan Department of Labor & Economic Growth (DLEG), the Greater Detroit Building and Trades Council, and the Michigan Occupational Safety and Health Administration (MIOSHA) signed a historic partnership January 12th to ensure the safety and health of workers on a large and complex construction project.

Walbridge Aldinger, the Detroit-based worldwide full-service construction company, has been contracted by the City of Dearborn to construct a $34 million Combined Sewer Overflow (CSO) project to build the largest sinking caisson in the world. The 30-month project began in early 2005. As general contractor, Walbridge Aldinger will coordinate the work of 21 subcontractors and 20 building trades unions, involving more than 500 trades workers.

Demonstrating Safety Leadership

"Walbridge Aldinger in one of Michigan's 'Economic All Stars' and is a true worldwide leader in the construction industry," DLEG Director David C. Hollister said. "This is a historic agreement not only because of the enormity of this project, but the scope of the partners signing on. Whether you are labor or management, public or private sector – this agreement says we are all on the same team that makes worker safety priority number one. This is collaboration at its best and hopefully the first of many of its kind in Michigan's construction industry."

The construction industry is one of the most hazardous industries in Michigan. Only about four percent of Michigan's workforce is employed in construction–however, construction fatalities account for more than 40 percent of all fatal workplace accidents. All partners are committed to creating an environment where every construction worker goes home healthy and whole every day.

"We share a common vision with our partners to be committed to providing all trades people and subcontractors a healthful and safe workplace and to demonstrate leadership, responsibility and accountability in furthering worker health and safety at all levels. The active integration of the safety and health program, along with this partnership with the trade unions, subcontractors, and MIOSHA will endorse the ultimate goal of zero injuries," said Walbridge Chairman and CEO John Rakolta, Jr. "It is key that the design, through construction with

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Walbridge Aldinger subcontractor Nicholson Construction Company removes 70-foot long ground freeze pipes with a drill rig, to prepare the site for installation of the new Dearborn Combined Sewer Overflow caisson.

In This Issue

DL&EG
Michigan Department of
Labor & Economic Growth

From the MIOSHA Director's Desk

Non-traditional Approaches To Achieve Our Mission

By: Douglas J. Kalinowski

For 30 years, MIOSHA has been dedicated to protecting the safety and health of Michigan's workers and employers through both strong enforcement and proactive consultation and educational programs. Over the years, the MIOSHA Program has grown and become a more mature agency. We have learned that there are many different strategies that can be used to achieve our mission. On some occasions, using these "nontraditional approaches" to help employees and employers have proven to be very effective and appropriate in avoiding or reducing injuries, illnesses and fatalities.

These innovative, new methods allow us to adjust to immediate needs, unusual circumstances, and critical moments when expedited action is required. The examples below highlight recent examples of MIOSHA's innovative ability to react timely and effectively. You have my commitment that MIOSHA will continue to look for and use all avenues to **make a difference** in worker safety and health across Michigan.

Proactively Leveraging Resources

Over the past few years, MIOSHA has developed partnerships and alliances with various organizations and their numbers are growing. On January 12th of this year, we signed a partnership agreement in Dearborn to proactively protect workers during the 30-month construction of one of the largest sinking caissons in the world. This partnership is both remarkable and historic because of the size of the project and the scope of the partners signing on. Led by Walbridge Aldinger, it includes more than 40 subcontractors and labor groups involving more than 500 workers. For details, see the cover article.

Through partnerships, MIOSHA can offer employers and employees a voluntary, cooperative relationship to eliminate serious hazards and achieve a high level of safety and health. This agreement says that we are all on the same team making worker safety the number one priority. David Hollister, Director of the Michigan Department of Labor and Economic Growth, stated, "This is collaboration at its best and hopefully the first of many of its kind in Michigan's construction industry."

Protecting Rescue Workers

As described in a discussion by Bob Pawlowski on Page 8 in this issue, the MIOSHA Program has been greatly involved in Michigan's emergency planning. In conjunction with the Michigan State Police Emergency Management Division, MIOSHA has developed a MIOSHA Emergency Management Plan (MEMP). Although much increased emphasis was placed on emergency planning following 9/11, the MEMP was designed to go well beyond acts of terrorism. These could include natural disasters, chemical emergencies, and other uncommon situations.

More importantly, it was established and organized to ensure that a core group of MIOSHA staff are trained and equipped to provide emergency responders with technical assistance when dealing with emergency situations that present safety and health hazards during initial response, rescue and recovery efforts. The MEMP was not established to in any way interfere with the operations of emergency responders, but to be a functional part of an Incident Command System (ICS). It was also created to address a range of emergencies from complex, sustained situations to smaller incidents.

In his discussion, Bob describes a trench collapse incident that occurred in December of last year. Using the principles of the MEMP, the actions by **MIOSHA were to help the emergency responders perform their rescue operations safely through technical assistance, not traditional enforcement**. The receptiveness of the emergency workers to our assistance and the ultimate outcome of the accident clearly demonstrated that using this approach works.

Going Beyond the Rules

While MIOSHA rules are promulgated to help ensure the safety of workers in Michigan, in many situations, technological advances are very often developed far in advance of rule changes. In an article on Page 6, Richard Grafmiller and Richard Mee describe the "beyond the minimum" requirements taken by a Michigan employer following a tragic construction accident. In this case, MIOSHA enforcement staff worked with the employer to identify control options that went beyond the requirements of current workplace regulations.

Moving Forward

These examples are only three situations where MIOSHA and proactive employers used non-traditional approaches to help protect the safety and health of workers in Michigan. We have incorporated a number of innovative, nontraditional approaches to add to our effectiveness.

MIOSHA will continue its strong, fair and balanced enforcement along with customer-based consultation, education and training. However, I assure you that we will also look beyond these approaches to more effectively carry out our mission. These will include technical assistance, creative partnerships, and working with employers and employees to implement programs and procedures that "go beyond the minimums."

Importantly, as a state administered occupational safety and health program, we are always open to your suggestions in using non-traditional approaches to solving worker safety and health issues. Please don't hesitate to contact any of our MIOSHA staff for input or assistance. Our phone numbers are listed on Page 20 of this publication. **We will listen and we will respond to your input and ideas**.

We must all work together to really **make a difference** in assuring that all of Michigan's workers go home from work safe and healthy every day.

Douglas J. Kalinowski

Congratulations IP Sturgis Plant!

International Paper's Sturgis Plant Receives the Prestigious MVPP Star Award for Safety and Health Excellence

On March 11th, International Paper's Sturgis Converting & Distribution Center received the Michigan Voluntary Protection Program (MVPP) Star Award today from the MIOSHA program for workplace safety and health excellence.

"We are proud to welcome International Paper's fourth Michigan Star site into this prestigious group of employers who recognize that focusing on safety up front is a sound business decision," said MIOSHA Director **Doug Kalinowski**. "Your corporate commitment to protect your workers sets the standard in Michigan and in the nation."

Reaching Star Status

Kalinowski presented the MVPP Star Flag to Plant Manager **Steve Knutson**, who accepted on behalf of the plant's 100 employees. State and local elected officials, corporate leaders, and MIOSHA representatives were on hand to congratulate employees and management on their outstanding achievement. The following officials participated in the award ceremony:

- **Cameron S. Brown**, Michigan Senate, District 16;
- **Joe Haas**, Sturgis City Mayor;
- **Jay Vogt**, IP Regional Program Manager of Health & Safety; and
- **Kent Hatcher**, IP Customer Value Manager Printing & Bristol Papers.

"Receiving the MVPP Star award recognizes the Sturgis employees for their outstanding commitment to safety and health," said Knutson. "The partnership formed between the Sturgis facility and MIOSHA takes safety to the ultimate level, which has a positive result for all the employees and their families."

The IP Sturgis Safety & Health Committee accepted the MVPP Plaque from MIOSHA officials on behalf of the plant's 100 employees.

This is the most prestigious safety and health award given in Michigan. MIOSHA established the MVPP program in 1996 to recognize employers actively working toward achieving excellence in workplace safety and health. Since 1999, Michigan has recognized 17 MVPP Star companies.

The Sturgis facility's incidence rates are well below the Michigan average for their SIC code, 2679, *Converted Paper and Paperboard Products – Not Elsewhere Classified*. The Total Case Incidence Rate for the plant was 1.0 in 2001, 2002, and 2003–compared to 9.6 in 2001, and 6.2 in 2002 and 2003 for the Bureau of Labor Statistics (BLS) industry average. The Total Days Away/Restricted Cases (DART) Rate for the plant was 0.0 in 2001, 2002, and 2003–compared to 5.7 in 2001, and 3.4 in 2002 and 2003 for the BLS industry average.

Recognizing Excellence

The Sturgis plant has an exemplary safety and health record, and has exhibited outstanding leadership in recognizing that a comprehensive safety and health program is critical to successful businesses. Their safety policy supports the corporate safety policy – which states, "Products can be made in a safe and healthful workplace." Their company goal is zero accidents.

On their road map to reaching Star status, the facility has met the rigorous MVPP Star program requirements. The **MIOSHA Review Team** consisted of: **Doug Kimmel**, CET MVPP Specialist; **Quenten Yoder**, CET Safety Consultant; **Sherry Scott**, CET Industrial Hygienist; and **Cindy Zastrow**, CET Industrial Hygienist. The Review Team conducted 18 formal and 10 informal interviews during the site visit. The team examined each of the five required elements of the site's safety and health management system and found the company to have an excellent system in place.

State and local officials joined employees and management of the Sturgis Converting & Distribution Center to celebrate their recognition as an MVPP Star.

Areas of Excellence:

- Management commitment – safety and health responsibilities are defined by the company and safety is a top priority.
- Employee involvement – all employees are encouraged to report hazards, participate in safety inspections, and participate on safety teams. They are empowered to shut down equipment if they feel they are at risk.
- Job Behavior Analysis (JBA) – JBA is used for baseline hazard identification and safety observation.
- Employees are allowed to take breaks as needed during hot weather and Gatorade is provided.
- Ergonomically safe tools are used for moving large rolls of paperboard.

Protecting Workers & the Environment

International Paper's corporate dedication to health and safety excellence is exemplified by their many facilities that have achieved Star status in OSHA's VPP Program. At year-end 2004, International Paper had 77 certified VPP sites.

The Sturgis facility converts rolls of paper into sheet form used primarily in commercial printing operations. There are 80,000 tons of paper converted annually in the facility. Major customers include: Hallmark, American Greetings, RR Donnelley, and Pollard Banknote.

International Paper (www.ipaper.com) is the world's largest paper and forest products company. They manage their worldwide forests under the Sustainable Forestry Initiative®, a system that protects the environment. They have operations in over 40 countries. ■

Fixing the System – Not the Blame
The Case for Accident Investigation

By: Sheila Ide, Supervisor
Consultation Education and Training Division

Do you ever make December mistakes in February? You know what I mean. You're on your way to work early one morning in late winter and run smack dab into a miles long traffic jam on the expressway. As you, fuming, mentally rearrange your schedule as time passes you muse, "Gee when are people going to learn to slow down when we get a little snow? This is the kind of thing you get during the first snowstorm in winter!" You know December mistakes in February.

So how does this scenario impact safety in the workplace? Well a wise person once said, "those who fail to remember history are doomed to repeat it!" Proper and thorough workplace accident investigation is both the history and the example by which we need to make the changes that will prevent us from repeating our mistakes, and hopefully save someone the anguish of injury or death.

Incorporating Essential Elements

It is true that what we pay attention to, what we measure, will be changed. Accident investigation lends itself to that maxim. If the measure of success is zero accidents, then failure is measured by not doing everything in our power to assure the accident will not occur, or worse, occur again. The emphasis should be on prevention by creating a workplace that allows employees to be productive, while removing any hazards that could cause people, equipment or production failures.

Sound hazard recognition, process evaluation, engineering and maintenance programs are essential elements in providing a safe workplace. Four contributing factors in workplace accidents that should be considered include: equipment or machinery design; environmental factors; systems and procedures; and, human behavior. When an error is made, the result should be no harm done.

Design considers how the workplace is laid out, as well as the tools and equipment used. Is there an impediment to carrying a part from one production area to another? Are packaging and shipping given enough space to perform efficiently? Is ergonomics considered when designing efficient workspaces? Are the most effective and "user friendly" tools provided to complete a task accurately and safely?

Has the workplace been examined to consider environmental factors such as noise, vibration, ventilation, light, and temperature extremes? When new equipment is introduced, is the existing workplace considered in regards to production needs and how it impacts or changes the human conditions? Is there adequate lighting for the tasks performed or are there enough air changes to control humidity, fans for cooling, appropriate clothing for cold temperature tasks?

Prestige Stamping Conducts Hazard Survey *- Press Operator James Young (L) and Die Setter John Henry (R) participated in a recent hazard survey with CET Safety Consultant Jennifer Clark-Denson (not pictured). Prestige Stamping of Warren is a proactive firm that has worked with the CET Division for more than 15 years.*

Uncovering System Problems

Creating standard operating procedures and providing effective training on every task, based upon changing conditions in the workplace, is of paramount importance. Often the system fails, damage or injury occurs, and production suffers when there has been no thought given to how a task is performed and people are not observed and coached to perform a task correctly. Handing an employee the keys to a forklift and telling them to go load a truck without adequate training and testing happens more often than we want to believe. The time spent in pre-planning and training will pay for itself quickly through a corresponding decline in direct costs, such as medical and workers compensation, damaged equipment and lost production.

Generally people will perform a job task regardless of the discomfort or inconvenience, and possible hazards, if that is what they are told to do. When the accident or injury occurs, there is a scramble to discover what the **injured party** did to cause the problem. Some research has suggested that unwanted situations within organizations are about 95 percent related to process problems, and only 5 percent related to personnel problems. Adequate pre-planning takes into account all the factors that could negatively impact the workplace.

Good and unbiased investigation techniques look beyond the obvious to discover all the factors involved that could cause a problem. Often a truly open investigation will disclose that situations existed or were inadvertently created where failure would inevitably occur! It was only a matter of time and/or circumstances. Consider an accident investigation the opportunity to uncover a situation of system failure rather than merely looking to place blame.

Creating Positive Change

Of course before an accident, injury or near miss occurs, procedures should be in place to deal with the immediate issues. These procedures should include medical care and/or rescue, making the area safe and securing evidence, interviewing witnesses, clean up and any required repairs. After the immediate issues are addressed the real work begins.

It is sometimes difficult to realize a system failure in the organization because situations, which repeat, are either distributed over time so no one realizes they are actually recurring–or the situation happens to different people, so there is not an awareness of the recurring nature of the situation. Although there are multiple approaches, issues or resolutions to a problem, in a busy operation there is a tendency to take the more expedient or obvious solution to deal with the issue of "why" and put in a quick fix.

The basics of accident investigation include the familiar "Who," "What," "When," "Where," and "How" questions. In the simplest form the investigators need to gather all information that may be contributing factors–both the obvious and the subtle; determine corrective measures such as redesign, engineering, new procedures, re-

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Lockout is a Workplace Priority

Case Studies Illustrate the Importance

By: Martha Yoder, Deputy Director
Michigan Occupational Safety and Health Administration

As MIOSHA begins its 30th year, there are so many things that have changed about the workplace. Technologies and automation that wasn't thought possible in 1975 is common place today.

A hazard that hasn't changed is the danger of being caught by the unexpected motion of machinery and equipment. After 30 years, the critical need to lock out machinery and equipment remains a priority focus for MIOSHA. Looking back five years, lack of compliance with the requirement for energy control programs has been the number one Serious violation each year.

For Fiscal Years 1999 through 2003, this one safety requirement has been cited 3,329 times with initial assessed penalties totaling nearly $2.5 million—money that would have been much better spent implementing safety and health management systems, including attending to required programs such as lockout. Research by federal OSHA indicates that companies receive a return on investment of $4 to $6 for each $1 invested in improving workplace safety and health.

Last fiscal year, lockout was cited in 464 General Industry Safety and Health inspections. Nearly 400 were the result of planned or programmed inspections, meaning the workplace was selected based on inclusion of the industry in the MIOSHA strategic plan, along with the specific experience at that site or for a reinspection to ensure that corrections are being maintained. Nine were the result of accidents, including two fatalities, and 50 were initiated through employee complaints.

Below are three Fiscal Year 2004 case studies that illustrate the important need for lockout in all types of work environments.

Case Study 1: Mold Machine Operator Loses Four Fingers and Palm

A mold machine operator with four years experience completed a job and needed to change the cutting heads prior to beginning the next job. He removed the cutting head and was about to install another. The employee said it was less trouble getting the heads set properly if he ran the spindle first without a cutting head on it so he turned on the motor. The spindle operated at a speed of 6,000 to 8,000 RPMs. The employee became distracted and forgot that he had turned the machine on. He lifted the cutting head to be installed with his left hand on the bottom and right hand on top. The spindle was still rotating. There was less than one-thousandth of an inch clearance between the shaft and inner bore of the cutting head and the head became stuck on the shaft. Only about 1" of the 4" long head was on the shaft as it spun and turned violently striking the employee's hand and pinching it against the base of the machine. The employee lost four fingers and the palm of his left hand. Due to the nature of the dust collection system on the machine, the amputated fingers could not be recovered.

Analysis

This is a small 25-employee millwork shop that manufacturers wood molding and trim. The facility had no previous MIOSHA inspection history. Changing the cutting head was part of the employee's job duties for the past four years. However, the employee was not provided with lockout training or a lock. None of the employees interviewed knew about or had received lockout training from the employer. The employer was cited for lack of lockout procedures and lack of employee training.

The employer accepted an Informal Settlement Agreement, which reduced the penalty from $400 to $200. As a small employer with no history, the gravity based penalty of $2,000 for each violation was reduced 60 percent for size and 10 percent for history. In addition, the employer did demonstrate commitment to safety and health, employee involvement, provided some safety training, maintained the injury and illness log, and provided appropriate personal protective equipment. These efforts resulted in an additional 20 percent reduction. As a result of the reduction factors, the assessed penalty was $200 per violation, $400 total.

Action

Procedures were written and implemented. All machinery and equipment were grouped into three categories, A-More than one energy source; B-Single lockable energy source, and C-Single cord and plug devices. Each machine was numbered and given a specification sheet showing all the lockout areas for all energy sources. Lockout training was provided to all authorized, affected, and other employees. In addition, an employee safety meeting was held to reinforce the new lockout procedures. In their abatement letter, the employer stated their firm belief that every measure has now been taken to ensure proper lockout is established and used on their premises.

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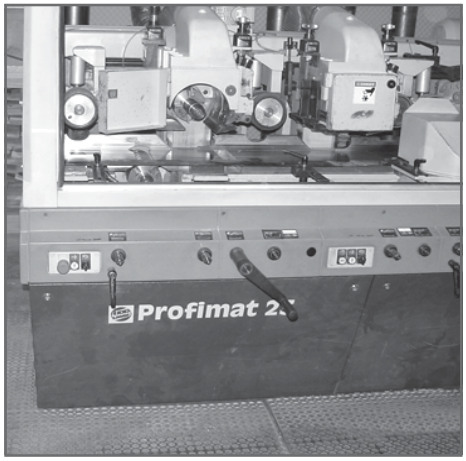
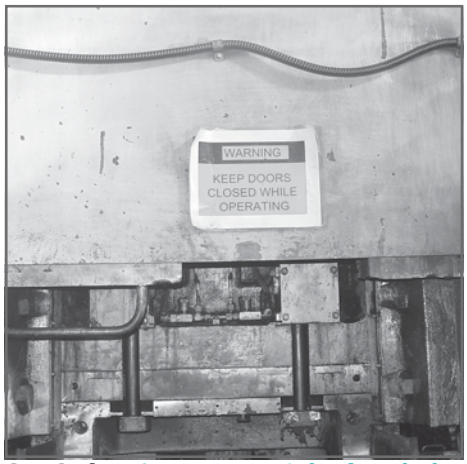


***Case Study 1:** A machine operator lost four fingers and his palm while changing the cutting heads on this mold machine.*

***Case Study 2:** A laundry press operator received a severe skull injury from failing to lockout this laundry press during servicing.*



***Case Study 3:** A press operator's hand was broken when he attempted repairs to this forging press without using lockout.*

Tragic Accident Leads to: Stronger Worker Protections

By: Richard Grafmiller, Senior Safety Officer
Richard Mee, Safety and Health Manager
Construction Safety & Health Division

Unfortunately, tragedy is a too frequent visitor to construction sites. Construction workers face accidental death in their industry at a rate about 10 times the average for all industries. For this reason, it is imperative that construction safety and health programs be aggressive in controlling the continuously changing conditions and hazards inherent in the industry. Complying with MIOSHA standards should be viewed as a starting point.

Government Requirements Are Only the Minimum

In 1912, the ocean liner *Titanic* carried almost 2,300 people on its maiden voyage across the Atlantic. With lifeboats sufficient to carry about 1,100 passengers, the ship's owners were in full compliance with government regulations for a vessel of its type. Government regulations, whether it be lifeboats on a ship or safety and health standards on construction sites, must be seen as a minimum or base, intended to be built upon for optimum effectiveness.

Not only was the *Titanic* underway without enough lifeboats to save everyone aboard; but its owners were so confident that an accident would not occur that the crew was inadequately trained in emergency lifeboat procedures. Only 702 people were saved in lifeboats designed to carry at least 1,100. Adequate training for the crew would have prepared them to save more than 400 additional people because they would have known that the passenger rating for each lifeboat was based on winds and rough water conditions. On the night of the sinking, the air was still with very calm water conditions. With proper crew training, it is likely that at least twice as many people could have been saved.

Fast Forward Eighty-Two Years

Unlike earlier times, many employers now have safety and health management systems that go beyond the minimum regulatory standards. These companies continue to recognize new hazards and amend their programs to address these dangers. One such company is Van Horn Concrete, located in Waterford in Oakland County. Their business delivers concrete to construction sites in large trucks equipped with a rotating drum. The configuration of the truck obstructs the driver's clear view to the rear when backing up. Reverse signal alarms had been installed on the trucks as required by the MIOSHA standard.

In a recent construction worksite accident, a city inspector was killed when he fell behind one of their large concrete delivery trucks and was backed over. The concrete truck had all safety features in good operating order, including the required audible back-up alarm. The incident occurred even though the truck's safety equipment met or exceeded the MIOSHA requirements.

This large concrete delivery truck can be a hazard to employees when backing up. It will be retrofitted with rear-viewing cameras and cab-mounted monitors to offer workers enhanced protection.

The company decided that more needed to be done to insure worker safety for those who had to work around and near their trucks. The vice president, after reviewing the circumstances of the accident and exposures to employees on the sites where company trucks make deliveries, has launched a program to equip all of their trucks with rear-viewing cameras and cab-mounted monitors.

This vice president is committed to never having a similar incident, and has demonstrated strong commitment by dedicating $20,000 to retrofit existing trucks, as well as to equip new trucks.

> When it's all over, it's not who you were. It's whether you made a difference.
> - Robert Dole

Training is being provided for the drivers/operators on how to use the cameras and monitors to help eliminate the significant blind spots behind these large vehicles when they are backing up. The drivers have been very receptive to the new equipment and welcome its use.

Making a Difference

While nothing will ever replace the individual who lost his life in this tragic accident, Van Horn Concrete has demonstrated strong commitment and a proactive position. They have stepped up to the plate, investigated the hazard revealed by the accident, and developed an innovative plan to reduce the hazard.

This company is not just doing business as usual; they are taking steps that really make a difference. This is the attitude that is necessary to recognize there is a problem and then take the necessary steps to correct the problem–and to recognize that their ultimate obligation is to protect their workers.

It is commendable to see such a positive response to a tragic accident. Our compliments to Van Horn Concrete for their exemplary response and action.

Certainly, the owners of the *Titanic*, her passengers, and crew could have benefited from this attitude.

The goal of the MIOSHA program is for every worker to go home healthy and whole every day. We are dedicated to working with employers to help them protect their workers and to help them solve difficult safety and health problems.

The MIOSHA CET Division can help employers identify safety and health hazards and to help employers reduce job injuries and illness through voluntary consultation, education and training. The division offers free, professional safety and health services to Michigan employers and employees. To take advantage of CET services to effectively address your workplace challenges, call 517.322.1809. ■

The Bottom Line

Workplace Safety and Health Makes Good Business Sense

Olympic Steel – Detroit Division

Olympic Steel is a 51-year-old company founded in 1954 by **Saul Segal**, in Cleveland, Ohio. The Olympic Steel Detroit Division, formally Lafayette Steel, was purchased by Olympic in 1995. The Detroit Division is one of 13 locations around the U.S. that make up Olympic Steel. The Detroit Division is unique in the Olympic Steel family because of the product mix that supplies the automotive industry. Other Olympic Steel facilities provide plate and coil material to the heavy industry and building trades.

Olympic Steel Detroit performs blanking, slitting and cutting-to-length of flat rolled steel. The majority of their customers are U.S. auto manufacturers or their suppliers, and integrated steel mills. Detroit's large facility, high-capacity processing equipment, and central location mean that its customers can depend on quality product, timely delivery and outstanding customer service.

Safety Commitment

Olympic Steel's commitment to safety starts with the CEO **Michael Segal**. He established 10 core values for all Olympic facilities, including safety. The core safety commitment says, "We are committed to providing a safe work environment and promoting employee health and well being through continuous education." This statement drives all employees to strive to ensure that every workday is accident free.

Several key methods are utilized to promote and enforce safety restrictions and requirements in the plant. The first method is having **Willie Reynolds**, the plant safety director, be a member of the union. Reynolds comes from the production floor and has first-hand knowledge of the problems that can arise. His commitment and dedication to providing a safe work environment is evident in the yearly declines in incident rates.

The second method is the plant safety committee, made up of union (International Union of Operating Engineers, Local 547) and management personnel. This committee has taken steps to identify potential problems before they become incidents. Weekly meetings are held to review open concerns, to assign priority, and to ensure steps are taken to resolve all concerns.

The third method is near miss reporting. Incidents that have the potential for causing injury are reported internally, just as if an injury had occurred. Countermeasure implementation to address the near miss has impacted both the number of incidents and the number of injuries. The fourth method is employee involvement. Employees have an incentive to work safe: quarterly safety bonuses. Each recordable safety incident impacts this bonus. Consecutive quarters without a recordable incident increases the amount of the bonus, up to a maximum of $200.

Productivity Benefits

The continued emphasis on safety has synergistic benefits not directly tied to safety. Productivity and housekeeping have improved through the efforts of the safety committee. The committee is standardizing housekeeping methods in each work center in the plant. The safety director then trains all the members of a work area, to standardize the procedures established by the committee. This has had a marked improvement in removing trip hazards and slip and fall hazards.

CET Safety Consultant **Linda Long** has worked with the company for several years, and has seen first-hand their safety and health improvements. Long was credited by General Manager **Dave Martin** for her safety leadership and support.

Training, focus, and rapid response have all combined to help Olympic Steel Detroit continually reduce recordable incidents. Continued diligence will ensure that the core safety goal initiated by CEO Michael Segal is met and surpassed in the future.

Olympic Steel Detroit Division employee Miguel Mejia is inspecting the tooling before making the next set-up on the bench head to slit the coils.

This column features successful Michigan companies that have established a comprehensive safety and health program which positively impacts their bottom line. An accident-free work environment is not achieved by good luck—but by good planning! Creating a safe and healthy workplace takes as much attention as any aspect of running a business. Some positive benefits include: less injuries and illnesses, lower workers' compensation costs, increased production, increased employee morale, and lower absenteeism.

Trench Collapse Rescue

MIOSHA Develops an Emergency Management Plan to Protect Rescue Responders

By: Robert Pawlowski, CIH, CSP, Director Construction Safety and Health Division

On Dec. 1, 2004, five Parkside Construction employees were working in the bottom of a trench installing sewer and water lines for a mini-mart/gas station being constructed in Pittsfield Township. The trench was approximately 14 feet deep and five feet wide at the bottom, with essentially vertical sides. The trench was also not equipped with appropriate shoring or trench-box to prevent cave-in, as required by MIOSHA Construction Safety Standard, Part 9, Excavation, Trenching and Shoring.

At about 4:00 p.m., a wall of the trench caved in, burying a worker in the bottom of the trench. Emergency rescue groups from around the metro area responded. It was determined that the buried employee was still alive and could possibly be rescued. After the victim's face was uncovered, he was provided with oxygen, and warm air was blown in to prevent hypothermia. The trench was shored by the rescue workers to prevent additional cave-ins. After nearly four hours, the worker was successfully removed from the trench alive, suffering broken bones and the memory of a traumatic accident.

The Parkside employee rescued on December 1st was very lucky. Cave-ins are perhaps the most feared trenching hazard. MIOSHA has investigated six fatal trench cave-in accidents in the four-year period of 2001 through 2004. However, other potentially fatal hazards exist in trenching and excavation operations, including asphyxiation due to lack of oxygen in a confined space, inhalation of toxic fumes, drowning, etc. Electrocution or explosions can also occur when workers contact underground utilities.

Rescue workers responded to a trench collapse that buried a Parkside Construction worker. After the victim's face was uncovered, they shored the sides of the trench before the rescue could begin.

Emergency Management Plan

Since 9/11 MIOSHA has been coordinating with other state agencies to provide advice and consultation to first responders on health and safety matters. Performing such rescues can be very dangerous and too often results in rescue workers themselves becoming victims. In the scenario described above, rescue workers were charged with rescuing the worker in a situation where further cave-in of the trench could result in additional tragedy.

The MIOSHA Emergency Management Plan (MEMP) was created on Nov. 12, 2004. The MEMP designates two teams of MIOSHA personnel with special training on how to respond to an emergency site, and become a functional part of the Incident Command System (ICS). The ICS designates a hierarchy of authority at an emergency response site and is a process by which different responding agencies coordinate to perform their designated functions. MIOSHA personnel would typically report to the site safety officer for the purpose of providing advice and consultation on health and safety matters.

MIOSHA's goal is to help assure the safety and health of emergency response workers and to provide support in all phases of emergency management operations. The purpose of the MEMP is to clarify procedures and policy for MIOSHA responses to significant incidents.

These procedures outline MIOSHA's role in providing technical assistance and consultation during initial response, recovery, and rescue efforts; followed by traditional compliance services during clean-up operations following an incident. The plan has the flexibility to manage responses to small incidents and can be expanded to cover complex, sustained incidents.

On Dec. 1st, a Parkside Construction worker was buried at the bottom of a 14-foot trench cave-in. Emergency responders worked for nearly four hours and successfully rescued the worker.

Support for Local Authorities

MIOSHA's primary role is to provide support to state and local authorities that are in charge of the response. Within 24 hours, MIOSHA personnel will respond to such an incident or be on-site at the scene of the incident and will remain on-site as appropriate. MIOSHA staff that respond will be provided with all necessary and appropriate personal protective equipment.

The MEMP process was used to provide health and safety advice and consultation to rescue workers at the trench collapse site in Pittsfield Township. Tony Allam, a Construction Safety and Health Division (CSHD) Supervisor and MEMP team member, saw the accident scene on television. Allam was concerned for the safety of the rescuers because local news helicopters were showing how dangerous the excavation was. Allam contacted Richard Grafmiller, CSHD Senior Safety Officer (SO), and asked him to go to the scene and serve as a resource for issues related to the safety of the trench.

Grafmiller reported a very receptive response. He was assigned to one of the responder's team members who requested assistance during the rescue. Grafmiller stayed on the scene until approximately 1:00 am the next morning. During the wrap-up, he provided feedback to the rescue units on improvements that could be made. The responders were very appreciative and reviewed the recommendations at their post-incident meeting.

MIOSHA Rescue Recommendations

- Individuals unnecessary to the rescue should be moved back away from the edge of

Cont. on Page 19

Workplace Violence Prevention

By: Kenneth Wolf, Ph.D.
Marilyn Knight, MSW
Center For Workplace Violence Prevention

Introduction

When we think of workplace violence, we think of the headline grabbing stories of mass shootings or of someone "Going Postal." Fortunately, however, these are events that do not occur often. What does occur more, are higher frequency, but less lethal incidents, that when ignored, may escalate into headline news.

This article will help you to understand the essential components of a workplace violence prevention program and how to implement one in your organization. Given some of the recent violent workplace events just this year, all employers, more than ever, want their employees, customers, and contractors to feel safe, and be safe, at work.

Violence Prevention Components

An effective violence prevention program should include the following components:

- An individual or a team who takes ownership of the program,
- A violence prevention policy,
- A threat reporting and an investigation system,
- Program Awareness Training for your entire workforce,
- Specialized investigation and assessment training for your safety team, and
- On-going program maintenance activities to keep the program active.

A key issue in maintaining a safe workplace for you, your employees and customers, is whether or not your managers or employees know how to recognize early indicators of threats.

A key issue is how do you differentiate between an individual who is having a performance problem or "bad day"–versus that low frequency individual who truly may pose a threat to the safety of your employees? In trying to make this distinction, there is a wide range of indicators to consider.

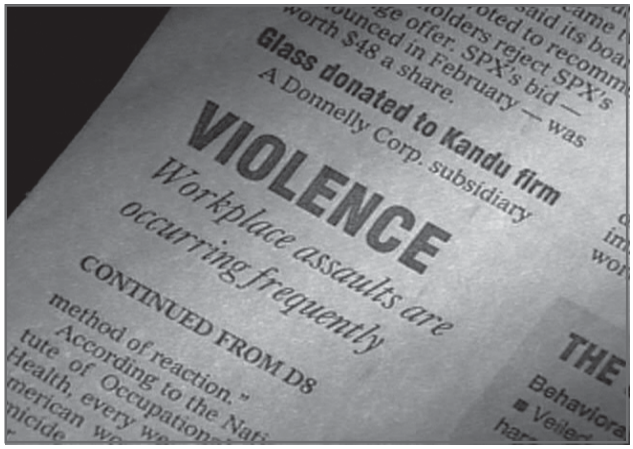
Early Warning Signs of Possible Aggression

When we think of types of behavior that constitute intimidation or violence, it is helpful to think of a broad range of definitions of aggressive behaviors, not just the sensational headline grabbing acts of physical assault or murder.

When we look at people who have acted aggressively, we discover that they often made previous statements or displayed behaviors that made others "uncomfortable." That is, their statements or behaviors generated a sense of fear or intimidation in others. Most often, the individual who may act aggressively displays a range of early warning signs before an act of violence occurs. It is important for the organization to recognize these signs and implement preventative measures.

Early warning signs of possible aggression may include:

- Verbal threats, intimidation;
- Non-verbal aggressive gestures;
- Harassment;
- References to acts of workplace violence, or perpetrators who have committed violent acts;
- Mood swings, rages;
- Externalization of blame;
- "Documenting or making lists" about other employees or individuals who are believed to be the cause of their problems;
- Being a loner;
- Continuing conflicts with co-workers or supervisors;
- Frightening comments about weapons;
- Paranoid beliefs;
- Threats of suicide or homicide;
- Domestic violence;
- Stalking;
- Vandalism;
- Obscene voicemails or e-mails;
- Incidents of slapping, hitting, shoving, kicking, sabotage;
- Destruction of computer systems or company property.



Any of these events may create fear, anxiety, and distrust that can contribute to a potential workplace violence problem. The most significant type of warning sign is when a person makes a specific threat of harm to an identifiable target. The more detail in the threat, the act of harm, the time, motive, means or method, the higher the level of risk.

Possible perpetrators of violence may include employees, domestic partners, outsiders, contractors, or customers. While the list of early warning signs is not all-inclusive, when you see these types of indicators, they must be investigated, documented, and managed if your program is to be a credible one.

It's very important to mention that, "correlation is not causation." While somebody may display some of these early warning behaviors, it does not mean that they will cause harm. Usually before someone commits violence, there is often a "precipitating stress" or "loss" that pushes him or her over the threshold of impulse control–they see violence as a means to solve their problem. Some of these precipating stresses may include: loss of a job, work status, or a promotion; loss of a significant other; or loss of health or money.

Risk Assessment

Once a threat is made or perceived, there are several appropriate actions for the employer to take. You should have a system in place for reporting these incidents and have a system for evaluating the credibility of the threat.

Employers need to document and investigate all threats. You will need to interview people related to the incident:

- The target of the threat,
- The alleged perpetrator,
- Witnesses,
- Appropriate supervisors.

Another important question is, "Can you manage and resolve this situation internally, or do you need to call in outside help?"

You may want to develop a list of external resources to supplement your internal violence prevention program. These resource relationships should be developed before you have an incident in which you will need their help.

You should consider identifying these resources and develop relationships with:

- Local law enforcement agencies,
- Community mental health agencies,
- Domestic shelters,
- Threat assessment professionals,
- Mental health facilities,
- Labor lawyers,
- Security professionals,
- Employee assistance programs.

Cont. on Page 19

Personal Protective Equipment
Who Pays? The MIOSHA View

By: Robert Pawlowski, CIH, CSP, Director Construction Safety and Health Division

MIOSHA requires employers to use personal protective equipment (PPE) to reduce employee exposure to hazards when engineering and administrative controls are not feasible or effective. Employers are required to determine all exposures to hazards in their workplace and determine if PPE should be used to protect their workers.

Our MIOSHA standards address PPE of many kinds: hard hats, gloves, goggles, safety shoes, safety glasses, welding helmets and goggles, face shields, chemical protective equipment and clothing, and specialized equipment such as respiratory protection and fall protection.

MIOSHA PPE Requirements

All three MIOSHA Personal Protective Equipment standards, Construction Safety Standard, Part 6; General Industry Safety Standard, Part 33; and Occupational Health Standard, Part 433; address general requirements for PPE in the workplace. Each of the PPE standards require an employer to provide to an employee, at no expense to the employee, the initial issue of the type of personal protective equipment which is suitable for the work to be performed as required by the standard.

The key phrase is, "**at no expense to the employee**," and leads MIOSHA to the interpretation that the employer is responsible for paying for necessary PPE.

In addition, the MIOSH Act, P.A. 154 of 1974, as amended, includes a specific provision addressing an employer's obligation for providing personal protective equipment. Section 11(d) specifies that an employer shall provide personal protective equipment at the employer's expense when it is required at the employer's expense in a rule or a standard. The Act also requires the standards commissions to follow specific guidance when determining who should pay for personal protective equipment in a rule. The criteria includes:

- Whether the equipment is transferable between employees;
- Whether the employer maintains the equipment;
- Whether the equipment generally remains at the work site after the work activity has been completed;
- The amount of personal use involved with the equipment; and
- Any other criteria deemed applicable by the standards promulgating commission.

OSHA PPE Clarifications

In contrast, federal OSHA rule 1926.95(a), Criteria for Personal Protective Equipment, states that PPE: "Shall be provided, used and maintained in a sanitary and reliable condition wherever it is necessary." It does not include language that addresses who pays. However, OSHA like MIOSHA has historically required the employer to pay for most required PPE.

The difference noted above in the comparable OSHA standard related to PPE, we believe, is at least part of the reason why, on March 31, 1999, OSHA issued proposed rules to clarify the issue of who pays. In the rulemaking, OSHA proposed regulatory language to clarify that, with only a few exceptions for specific types of PPE, the employer must pay for PPE provided. OSHA proposed an exception from employer payment, in certain circumstances, for three specific kinds of PPE: safety-toe protective footwear, prescription safety eyewear, and the logging boots required by 29 CFR 1910.266(d)(1)(v), MIOSHA General Industry, Part 51, Rule 5125(1).

***Bad Example** - This employee lacks the appropriate PPE (face/eye, respiratory and hearing protection), while cutting masonry black using an abrasive wheel saw.*

OSHA also stated at that time that the proposed rule would not require employers to provide PPE where none had been required before. Instead, the proposed rule stipulated that the employer must pay for all required PPE, except in the limited cases stated above. Since employers already paid for most of required PPE, the proposed rule would have shifted only minimal additional costs to the employer. Public comments were heard on the rules, hearings were held and the record was closed on December 13, 1999.

On July 8, 2004, OSHA published a notice asking for further comment on one issue. Specifically, the issue relates to whether or how a general requirement for employer payment for PPE, should address types of PPE that are typically supplied by the employee, taken from jobsite to jobsite or from employer to employer, and considered to be "tools of the trade." In light of significant comments in the record, OSHA believes that further information is necessary to fully explore the issues concerning a possible limited exception for paying for PPE that is considered to be a "tool of the trade."

MIOSHA Defines Employer Responsibility

MIOSHA has typically viewed providing and paying for PPE to protect employees as a responsibility that falls to the employer. We understand that construction workers have typically provided their own steel-toed work boots (in accordance with MIOSHA Part 6, Rule 625(2)) and hard hats, although we would not discourage employers from paying for this necessary equipment. For general industry, Part 33, spells out the types of PPE that are required to be provided at no expense to the employee and the types, such as protective footwear, that may be negotiable between the employer and the employee.

In addition, where there are multiple methods of protection available, an employer may provide the least expensive form of protection and negotiate other forms of the protective equipment. For example, an employer may choose to provide approved goggles that can be worn over prescription glasses and negotiate payment of prescription safety glasses.

As a State Plan program, MIOSHA is required to have rules and standards that are "at least as effective as" federal OSHA. The MIOSHA program is monitored on a continual basis by OSHA to ensure that we are meeting our obligations in this regard.

At the other end of the spectrum, MIOSHA can make decisions regarding rules, standards or policies that we believe enhance safety and health for employees beyond the minimum requirements mandated by OSHA. We are not sure at this time what OSHA will conclude with regard to "tools of the trade" and employer payment for PPE, but we will be watching them closely. Our decision to adopt new policies will be based on how such changes impact the safety and health of Michigan workers. ■

Permit-Required Confined Spaces

MIOSHA Recently Issued Written Guidelines for the Enforcement and Interpretation of the Permit-Required Confined Spaces (PRCS) Standard

By: Charles E. Picardy, CIH, Health Supervisor
General Industry Safety and Health Division

MIOSHA's Strategic Plan for Fiscal Years 2004-2008 calls on the agency to, "Strengthen public confidence through continued excellence in the development and delivery of MIOSHA's programs and services."

In a 2002 survey, MIOSHA stakeholders identified consistency in information provided by agency staff and in application of the standards as an important factor in both rating the "usefulness" of the MIOSHA program and their confidence with the agency.

One approach identified to help ensure greater consistency among staff is to develop and distribute documents that provide information on how to apply and interpret specific MIOSHA rules and requirements.

These instructions also provide information that can be used by employers and employees to help understand MIOSHA expectations. As instructions are developed, those that address rule application and agency processes affecting the public will be published on the MIOSHA website, as well as distributed internally to MIOSHA staff.

Rule Application & Inspection Guidelines

The most recent instruction issued provides guidance on applying MIOSHA's Permit-Required Confined Spaces Standard (PRCS). The instruction applies to General Industry Safety Standard Part 90, R 408.19001 et seq., and Occupational Health Standard Part 490, R325.63001 et seq., which took effect October 30, 1993. This standard does not apply to agricultural operations or shipyard employment. Except as provided in paragraphs (c)(8) and (c)(9) of 29 CFR 1910.146, this standard does not apply to the construction industry.

To be covered under the standard, a space must meet the definition of a "confined space" **and** have one or more of the following characteristics:

1. Contains or has a potential to contain a hazardous atmosphere;
2. Contains a material that has the potential for engulfing an entrant;
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
4. Contains any other recognized serious safety or health hazard.

The standard describes minimum safety and health program management practices for a permit-required confined space (permit space or PRCS). It also recognizes the dynamic character of permit spaces as they occur in general industry. Thus, the standard and its enforcement focus on the employer's whole program as conceived, documented and implemented as a primary safeguard for employees and on the capacity of that program to detect confined space hazards and to respond to them appropriately. Inherent in the standard is the requirement (29 CFR 1910.146(c)(6)) for employers to be ever mindful that changes in non-permit confined spaces may create or introduce a hazard that would necessitate re-evaluation and, in some cases, reclassification of spaces.

If an employer decides that its employees will not enter permit spaces, they must take effective measures to prevent its employees from entering the permit spaces and comply with paragraphs (c)(1), (c)(2), (c)(6) and (c)(8) of the standard.

If an employer decides that its employees will enter permit spaces, the employer must develop and implement a written permit space program that complies with the standard. Paragraphs (c)(5) and (c)(7) of the standard contain provisions for employers to use alternate entry procedures or reclassify a permit space to a non-permit space, respectively, if certain criteria are met.

The instruction indicates that during a MIOSHA inspection or investigation, compliance officers will normally review employer's PRCS programs as follows:

1. Unprogrammed Inspections: A comprehensive PRCS program review is expected to include a review of all recognized confine spaces where the subject of the complaint, referral, or initiating event is permit space hazards. Additionally, the employer's PRCS program will be evaluated when the compliance officer observes employees exposed to permit space hazards even if they were not the subject of the complaint, referral, or event.
2. Programmed Inspections: A PRCS program review normally will be part of comprehensive general industry programmed inspections in any workplace where confined spaces may exist.

Appendix Material

The agency instruction includes six appendixes with further information and guidance:

- Appendix A is a permit-required space flow chart.
- Appendix B provides questions and answers on clarification for various requirements of the standard.

***Good Example** - This wastewater treatment pit contains the warning, "DANGER: Confined Space – Enter By Permit Only."*

- Appendix C provides a list of specific MIOSHA vertical standards taking precedence over the PRCS Standard.
- Appendix D provides general guidelines for PRCS program evaluation considerations.
- Appendix E provides clarification for electrical utilities.
- Appendix F provides general guidelines for PRCS citations issued by MIOSHA.

Website Availability

The instruction, *Application of the Permit-Required Confined Spaces Standard (PRCS), Agency Instruction, MIOSHA-STD-05-1*, is on our website at: www.michigan.gov/mioshapolicies. Click on "Search for Instructions" and type in the name. Instructions related to a specific standard are linked on the standard page, as well as listed under policies and procedures. ■

Lanzo Construction Company Sentenced in Worker's Death

On Oct. 21, 2004, Lanzo Construction Company was found guilty by **Judge Colleen A. O'Brien** of a MIOSHA felony in the 1999 workplace fatality of their employee, Robert James Whiteye. This landmark criminal case in workplace safety was first brought by **Governor Jennifer M. Granholm** as Attorney General.

On Jan. 5, 2005, Judge O'Brien handed down the sentence in Oakland County 6th Circuit Court against Lanzo Construction Company. The company received two year's probation and the maximum statutory penalty of $10,000 for the MIOSHA felony.

The Michigan Occupational Safety and Health Administration (MIOSHA) investigated the May 24, 1999, cave-in that killed Whiteye and found that Lanzo Construction Company violated the most basic provisions of the MIOSHA trenching standard. MIOSHA is part of the Michigan Department of Labor & Economic Growth (DLEG).

"Workers have a right to go home healthy and whole every day. This is the basic tenet of the MIOSHA program," said **DLEG Director David C. Hollister**. "Lanzo Construction Company has habitually and recklessly placed their workers in harm's way. This sentence sends a message to all companies that there are serious consequences for employers who refuse to protect their workers."

Judge O'Brien named **Quirino (Gary) D'Alessandro, Sr.**, president and major shareholder of Lanzo Construction Company, as the responsible party for the corporation throughout the two-year probation. He must file a written report with the court every month stating that they are in compliance with the conditions of probation and that they have not violated any state or federal laws. Specifically, they must advise the court of any notice of MIOSHA violations at the time the citations are issued.

In her Oct. 21st decision Judge O'Brien said, "The conduct of Defendant's employees on the day of this fatality was, indeed, willful. Clearly, there was no 'justifiable excuse' for failing to slope, shore or otherwise protect the employees within the excavation on Lake Ravine Drive."

Based on provisions in the MIOSH Act, Public Act 154, as amended, every willful violation, which is connected to a fatality, is referred to the Michigan Attorney General's Office for criminal investigation and/or prosecution.

In addition to the statutory penalty of $10,000, Lanzo must also pay a $60 crime victim fee, $3,240 in court supervision fees, and $600 in court costs.

MIOSHA Civil Case

On May 24, 1999, a crew from Lanzo Construction Company was installing sewer pipe when a cave-in occurred on Lake Ravines Drive in Southfield. Robert James Whiteye, 52, a pipe layer, was pronounced dead at the scene after rescuers worked for several hours to extricate him from the trench. The fatality occurred in an area of the excavation that was approximately 18 feet deep, with vertical walls, and without any protection to guard against cave-ins.

The investigation revealed that Lanzo Construction knew of the substantial risk of injury to employees engaged in trenching work, and failed to provide trenching support to prevent injury to their employees. Company officials were at the job site and made no effort to protect their employees. Additionally, they failed to furnish Whiteye a place of employment free from recognized hazards that were likely to cause death or serious physical harm.

On March 2, 2000, 30 citations for civil violations of the (MIOSH) Act were hand delivered to Lanzo Construction Company, including: 12 alleged willful serious violations, 12 alleged serious violations and six alleged other-than-serious violations. Six of the 12 alleged willful violations relate directly to the fatality. The proposed penalties totaled $657,500. Lanzo has appealed the 30 civil citations resulting from this incident, and the MIOSHA administrative appeal concerning the civil violations has been held in abeyance until the conclusion of the criminal case.

Now that the criminal case has concluded, MIOSHA will pursue the civil case. In addition to the Whiteye fatality, there are 10 outstanding cases (subsequent to the fatality) that are in the MIOSHA appeal process, with 115 proposed violations and $573,977 proposed penalties. Total proposed penalties, including the Whiteye fatality, for Lanzo exceed $1.2 million. ■

DEQ Workshops

Risk & Vulnerability Assessment for Hazardous Materials Facilities

Learn How to Make Your Plant Safer & More Secure

Securing hazardous materials facilities is an important part of protecting our state and its people. A release of large volumes of hazardous materials could endanger public health and harm the environment. A large release might be caused by a terrorist attack, vandalism, theft, a natural disaster, or utility failure.

The **Michigan Department of Environmental Quality** is sponsoring a series of workshops for businesses and industries that manufacture, use or store hazardous materials.

The workshops will instruct participants in how to conduct their own risk and vulnerability assessment, including:

- Chemical Hazard Evaluation,
- Process Hazard Assessment,
- Consequence Assessment,
- Physical Factors Assessment, and
- Security Assessment/Gap Assessment.

The workshops are supported by grants from the **U.S. Department of Homeland Security** and are being run by **Camp Dresser and McKee** (CDM), an environmental firm with security expertise.

Date	Location
April 25	Milford
May 2	Lansing
May 3	Taylor
May 10	Kalamazoo
May 12	Grand Rapids
May 17	Zilwaukee
May 19	Roscommon
May 31	Marquette
June 6	Novi
June 9	Northville

For information or to pre-register, go to the DEQ website: www.michigan.gov/deq. Click on "News & Events," then "Training and Workshops," and then "Other Training Opportunities."

There is no charge, but space is limited, so you **must pre-register.** If you have any questions, please contact **Thor Strong**, DEQ Project Manager, at **517.241.1252**.

Education & Training Calendar

Date	Course Location	MIOSHA Trainer Contact	Phone
May			
4	Self Inspection to Identify Hazards & Safety Training Needs Westland	Linda Long Toni Herron	734.427.5200
4, 11, 18	Safety & Health Administrators Course Grand Rapids	Micshall Patrick Penny Mollica	616.698.1167
5	Elements of a Safety & Health Management System Roscommon	Anthony Neroni Shelly Hyatt	231.546.7264
6	Fireworks Safety for Fire Departments Bay City	Lee Jay Kueppers Dee Warren	989.892.8601
10	Ergonomics: Health Care Facilities Holland	Dave Humenick Staff	616.331.7180
10	Dealing with Workplace Violence Marquette	Barry Simmonds Kelli Barry-Angeli	906.226.6591
11	Powered Industrial Truck Train-the-Trainer Detroit	Jennifer Clark-Denson Sonya McDowell	734.487.2259
11	Ergonomic Principles Harrison	Bob Carrier Karen Kleinhardt	989.386.6629
11, 18, 25	Safety and Health Administrators Course Jackson	Quenten Yoder Bill Rayl	517.782.8268
12	When MIOSHA Visits Clarkston	Richard Zdeb Peggy Desrosier	248.620.2534
12	Lockout and Machine Guarding Holland	Rob Stacy Staff	616.331.7180
17	Fleet Safety Muskegon	Rob Stacy Staff	616.331.7180
17 & 18	MIOSHA 10-Hour for Construction Kalamazoo	Debra Johnson Staff	517.371.1550
18	Dealing with Workplace Violence Detroit	Linda Long Sharon Thornton	313.846.2240
19	Fleet Safety Howell	Karen Odell Janie Willsmore	517.546.3920
25	MVPP & MSHARP Workshop Midland	Doug Kimmel Maria Sandow	989.496.9415
26	Machine Guarding, JSA and Lockout/Tagout Port Huron	Karen Odell Carter Hitesman	810.982.8016
June			
7, 8, 9	Safety & Health Administrator Course for Construction Grand Rapids	Debra Johnson Elleena Chizan	616.324.3382
9	Overhead and Gantry Cranes Holland	Rob Stacy Staff	616.331.7180
9	Lockout and Machine Guarding Clarkston	Richard Zdeb Peggy Desrosier	248.620.2534
21 & 22	Two-Day Mechanical Power Press Holland	Rob Stacy Staff	616.331.7180

Co-sponsors of CET seminars may charge a nominal fee to cover the costs of equipment rental, room rental, and lunch/refreshment charges. For the latest seminar information check our website, which is updated the first of every month: www.michigan.gov/miosha.

Construction Safety Standards Commission

Labor

Mr. Tom Boensch**
Mr. Andrew Lang
Mr. Larry Redfearn
Vacant

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Mr. Peter Strazdas
Ms. Cheryl Hughes
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Occupational Health Standards Commission

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Ms. Cynthia Holland
Mr. Michael McCabe

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Mr. Robert DeBruyn
Mr. Michael Lucas
Mr. Douglas Williams

Public Member

Dr. Darryl Lesoski

***Chair** ****Vice Chair**

Standards Update

OSHA Standards Improvement Project

Federal OSHA published a final rule in the Jan. 5, 2005, ***Federal Register*** on Phase II of its Standards Improvement Project. The project addresses inconsistent, duplicative or outdated provision in OSHA safety and health standards for general industry, maritime and construction. In the Phase II project, OSHA revised or removed 40 health provisions in 23 standards.

In some cases, OSHA has made revisions to requirements because they are outdated, duplicative, unnecessary, or inconsistent with more recently promulgated health standards. OSHA believes these revisions will reduce regulatory requirements for employers while maintaining the safety and health protections afforded to employees. The final federal rule became effective March 7, 2005.

OSHA stated that these changes impose no additional or more stringent requirements, which is a significant factor in MIOSHA's ability to meet its State Plan obligation to be "as effective as" OSHA. Michigan intends to address these changes through the rule promulgation process; however, the changes do not automatically apply to Michigan workplaces.

The details of these revisions are available on the OSHA website at: www.osha.gov. Under the right-hand topic area "Laws and Regulations," click on "Federal Registers," and then in the "Text Search" box type in standards improvement. For questions regarding these revisions, contact the OSHA Lansing Area Office at: 517.487.4996.

MIOSHA Delays Annual Fit Testing for TB

The Michigan Occupational Safety and Health Administration (MIOSHA) will delay the requirement for annual fit testing of respirators for occupational exposure to tuberculosis (TB). The delay covers fiscal year (FY) 2005, from October 1, 2004, to September 30, 2005.

This action follows the lead of federal OSHA, who received this direction from Congress. The Consolidated Appropriations Act, passed by Congress, includes an appropriations restriction for OSHA activities which states that none of the funds appropriated shall be obligated or expended to administer or enforce the provisions that require an annual fit testing of respirators (after the initial fit testing) for occupational exposure to TB.

During FY 2005, employers may not be inspected or cited for the requirement to do annual fit testing of respirators for occupational exposure to tuberculosis. No other provisions of MIOSHA Part 451, Respiratory Protection, are affected by this appropriations restriction.

MIOSHA will continue to cite the remainder of Part 451 as it relates to respirators, including the provisions for an initial fit testing or whenever a different respirator facepiece is used. The appropriations restriction also does not affect the provision requiring an additional fit test when facial changes have occurred that could affect the proper fit of the respirator.

In addition, the appropriations restriction affects only annual fit testing of respirators used for protection against TB. All requirements of the respiratory protection standard, including annual fit testing, will continue to be cited for respirator use against other hazards, such as Severe Acute Respiratory Syndrome (SARS) or other bioaerosols.

In addition to the requirements of the respiratory protection standard, employee exposures to TB are also addressed by MIOSHA Directive No. 96-9, *Enforcement Policy and Procedure for Occupational Exposure to Tuberculosis*. This directive provides guidance on agency expectations for employers based on industry recognition that exposure to TB is a recognized hazard. The directive identifies health care facilities, long-term care facilities for the elderly, homeless shelters, drug treatment centers, and correctional facilities as posing a high risk of TB exposure.

MIOSHA will continue its current enforcement policy of Directive No. 96-9, through the General Duty Clause, when an employer has a confirmed or suspected case of TB and is not adequately addressing the hazard.

Employers who have questions about TB enforcement and compliance issues may contact **MIOSHA TB Specialist, Gerry Dike, General Industry Safety and Health Division, at 248.888.8863**. Employers who have questions regarding MIOSHA outreach services are encouraged to contact the **Consultation Education and Training (CET) Division, at 517.322.1809**.

To contact any of the Commissioners or the Standards Section, please call 517.322.1845.

Status of Michigan Standards Promulgation

(As of March 22, 2005)

Occupational Safety Standards

General Industry

Part 08.	Portable Fire Extinguishers	Approved by Commission for review
Part 17.	Refuse Packer Units	Approved by Commission for review
Part 18.	Overhead & Gantry Cranes	Formal rules submitted to ORR/LSB
Part 19.	Crawler, Locomotive, & Truck Cranes	At Advisory Committee
Part 20.	Underhung Cranes & Monorail Systems	Approved by Commission for review
Part 58.	Vehicle Mounted Elevating & Rotating Platforms (Joint w/CS 32)	At Advisory Committee
Part 62.	Plastic Molding	Approved by Commission for review
Part 79.	Diving Operations	Approved by Commission for review
Pending	Ergonomics (Joint)	At Advisory Committee
Pending	Telecommunications (Joint)	Approved by Commission for review

Construction

Part 01.	General Rules	Approved by Commission for review
Part 07.	Welding & Cutting	Final, effective 1/20/05
Part 08.	Handling & Storage of Materials	Final, effective 11/16/04
Part 12.	Scaffolds & Scaffold Platforms	Approved by Commission for review
Part 16.	Power Transmission & Distribution	At Advisory Committee
Part 26.	Steel Erection	Formal rules submitted to ORR/LSB
Part 30.	Telecommunications (Joint)	Approved by Commission for review
Part 31.	Diving Operations	Approved by Commission for review
Part 32.	Aerial Work Platforms (Joint w/GI 58)	At Advisory Committee
Pending	Communication Tower Erection	Approved by Commission for review

Occupational Health Standards

General Industry

Part 451.	Respiratory Protection	Formal rules submitted to ORR/LSB
Part 504.	Diving Operations	Approved by Commission for review
Part 520.	General Ventilation	Formal rules submitted to ORR/LSB
Part 526.	Open Surface Tanks	Approved by Commission for review
Part 528.	Spray Finishing Operations	Approved by Commission for review
Part 529.	Welding, Cutting & Brazing	Approved by Commission for review
Pending	Diisocyanates	At Advisory Committee
Pending	Ergonomics (Joint)	At Advisory Committee
Pending	Latex	Approved by Commission for review

Construction

Part 665.	Underground Construction	Final, effective 12/24/04

The MIOSHA Standards Section assists in the promulgation of Michigan occupational safety and health standards. To receive a copy of the MIOSHA Standards Index (updated June 2004) or for single copies and sets of safety and health standards, please contact the Standards Section at 517.322.1845, or at www.michigan.gov/mioshastandards.

RFR Request for Rulemaking
ORR Office of Regulatory Reform
LSB Legislative Services Bureau
JCAR Joint Committee on Administrative Rules

MIOSHA News Quiz

Topic: Suspended Scaffolding

By: Richard Kawucha, Senior Safety Officer
Construction Safety and Health Division

Questions

1. True or False. A 10,000-pound capacity electric truck winch may be used to raise and lower a suspended scaffold weighing 2,000 pounds.

2. A swing stage scaffold has just been erected and tested for 500 pounds. Who can work on it at any one time?

A. Three 150 pound workers.
B. Two 200 pound workers.
C. Two 125 pound workers and one 200 pound worker.
D. All of the above.

3. Who can design multipoint adjustable suspension scaffold connections?

A. Any experienced structural engineer.
B. An engineer experienced in multipoint adjustable suspension scaffold design.
C. An engineer experienced in crane design.
D. Both B and C.
E. Both A and B.
F. A, B, and C.

4. From what material shall a "float scaffold" be built?

A. ¾ " Interior Grade Plywood.
B. ¾ " OSB (Oriented Strand Board).
C. Full Dressed (2" thick) 2 x 10 southern pine lumber.
D. None of the above.
E. All of the above.

5. How many forged wire rope clips are needed to secure a ¾" diameter steel wire rope used for the suspension of a multipoint suspension scaffold?

A. 2
B. 3
C. 4
D. 5

6. Spliced eyes or swaged attachments for wire suspension ropes shall only be used when made by?

A. Wire Rope Manufacturer.
B. Qualified Person.
C. All of the above.

7. If a scaffold hoist machine has a load rating of 1,000 pounds, the stall load for the machine shall not be more than?

A. 1 ton.
B. 1½ tons.
C. 2 tons.
D. 2½ tons.

8. Counterweights can be removed from a scaffold outrigger beam?

A. Once the scaffold is at it's maximum height, and the boss says it's okay to do so.
B. Once the scaffold has been inspected and tested.
C. Once the scaffold is disassembled.

9. Repaired wire rope can be used for a scaffold suspension rope?

A. Never.
B. At any time.
C. It depends on the application.

10. True or False. The beams for a needle beam scaffold shall be of wood of not more than 4-inches by 6-inches with the greater dimension set horizontally.

Answers

1. False – R.408.41214 (1) states that a hoist that is used on a suspension scaffold, swinging scaffold or powered mobile elevating platform must carry a label from a nationally recognized testing laboratory, such as Underwriters Laboratories or Factory Mutual Engineering Corporation, that states that it is approved for personnel use.

2. B – R.408.41233 (6) states that for a scaffold designed for a working load of 500 lbs., not more than two employees shall be permitted to work at one time.

3. F - R.408.41229 (5) requires that the designer of multipoint adjustable scaffold connections must be an engineer who is experienced in their design. If all of the engineers have experience in multipoint adjustable scaffold connections, then all of them could design them.

4. D - R.408.41238 (1) requires that the material be "exterior" grade plywood or it's equivalent.

5. D - R.408.41232 (3) requires that you refer to table 5 of R.408.41261 (11) for the correct number of clips, which would be "5."

6. C - R.408.41229 (20) requires that swaged attachments or spliced eyes shall not be used unless the wire rope manufacturer or a qualified person makes the attachments.

7. B – R.408.41214 (4) states that the stall speed for any scaffold hoist shall not be more than three times it's rated load. So if a scaffold hoist is rated for 1,000 pounds (½ ton), then the stall speed cannot be more than 1½ tons (3 X 1,000 = 3,000 pounds or 1½ tons).

8. C – R.408.41229 (9) states that the counterweights shall not be removed from an outrigger beam until the scaffold is disassembled.

9. A – R408.41229 (18) states that repaired wire rope shall not be used for a suspension rope.

10. False – R408.41236 (2) states that the beams shall not be "less than 4-inches by 6-inches, with the greater dimension set vertically."

Variances

Published April 18, 2005

Following are requests for variances and variances granted from occupational safety standards in accordance with rules of the Department of Labor & Economic Growth, Part 12, Variances (R408.22201 to 408.22251).

Variances Requested Construction

Part number and rule number from which variance is requested
Part 32 - Aerial Work Platforms: R408.43209, Rule 3209 (8)(b) and Rule 3209 (9)
Summary of employer's request for variance
To allow employer to firmly secure a scaffold plank to the top of the intermediate rail of the guardrail system of an aerial lift for limited use as a work platform provided certain stipulations are adhered to.
Name and address of employer
Lake State Insulation, Inc.
Location for which variance is requested
General Motors, Paint Facility, Body Shop, General Assembly, Tressles, & Tank Farm, Delta Township
Name and address of employer
Superior Industrial Insulation Co.
Location for which variance is requested
G M Paint Facility, Delta Township
Name and address of employer
W. J. O'Neil Co.
Location for which variance is requested
University of Michigan Cardiovascular Center Project, Ann Arbor

Variances Granted Construction

Part number and rule number from which variance is requested
Part 32 - Aerial Work Platforms: R408.43209, Rule 3209 (8)(b) and Rule 3209 (9)
Summary of employer's request for variance
To allow employer to firmly secure a scaffold plank to the top of the intermediate rail of the guardrail system of an aerial lift for limited use as a work platform provided certain stipulations are adhered to.
Name and address of employer
Alberici Constructors
Location for which variance is requested
GM Lansing Delta Township Assembly, Delta Township
Name and address of employer
John E. Green Co.
Location for which variance is requested
GM Lansing Delta Township Assembly, Delta Township
Name and address of employer
Mall City Mechanical Inc.
Location for which variance is requested
Borgess Medical Center, Kalamazoo

Walbridge Aldinger Partnership

Cont. from Page 1

safety polices and procedures, support the quality of life on this project by ensuring that everyone goes home the way that they came to work."

Signing partners include: **John Rakolta, Jr.**, Chairman and CEO, **Ronald Hausmann**, P.E., President – Heavy Civil Group, and **Steve Clabaugh**, Assistant Vice President of Safety & Health, Walbridge Aldinger; **David Hollister**, Director, Michigan Department of Labor & Economic Growth; **Doug Kalinowski**, Director, MIOSHA; **John Hamilton**, President, and **Patrick Devlin**, Secretary-Treasurer, Greater Detroit Building and Construction Trades Council. Also signing were all of the **subcontractors** and **building trades unions** working on the project.

Planning for Safety

"We're glad that MIOSHA and companies like Walbridge-Adinger recognize there is nothing more important in our business than making sure construction workers spend a safe day at work so they can go home to their family," said Patrick Devlin, Secretary-Treasurer of the Greater Detroit Building and Construction Trades Council. "Intensive planning for safety before a construction project begins is something we'd like to see more often."

Partnerships are an important emphasis in MIOSHA's Strategic Plan to improve the health and safety of workers through cooperative relationships with groups, including trade associations, labor organizations, and employers. Partnerships move away from traditional enforcement methods and embrace collaborative agreements.

"This is a dangerous business, but construction projects can be made safer when there's proper planning," said John Hamilton, President of the Greater Detroit Building and Construction Trades Council. "If safety planning becomes part of a construction project's blueprints, so to speak, we would greatly reduce worker injuries and fatalities."

The "Walbridge Aldinger Safety and Health Program" has been established principally to govern the activities of all personnel employed in any capacity in the Dearborn CSO Contract #3 project. Recognizing that engineering techniques alone are not enough to ensure that exposure to hazards are controlled, the program includes coordination, monitoring and educating the personnel involved in the project. These components will be implemented through the same principles of management control applied throughout all phases of the project.

Eliminating Serious Hazards

As part of the partnership, Walbridge will implement a process to audit the job for safety and will involve the partnering sub-contractors in developing and implementing corrective measures. Walbridge Aldinger will report all incidents and accidents to MIOSHA and will provide monthly safety reports. MIOSHA will conduct compliance inspections and job-site surveys on pre-determined serious hazard issues.

"The MIOSHA program is dedicated to working with employers to find innovative ways to enhance workplace safety and health," said MIOSHA Director Doug Kalinowski. "Through partnerships, MIOSHA can offer employers a voluntary, cooperative relationship to eliminate serious hazards and achieve a high level of safety and health."

Walbridge is responsible for the construction of a 350-foot concrete pre-cast diversion channel, and the construction of a sinking caisson that is 151-feet in diameter that will create a CSO structure. The caisson will be sunk approximately 110-feet into the sandy soil and bedrock. By the completion of the project more than 500 trades people will have contributed on various phases of the project including carpenters, laborers, cement masons, bricklayers, operators, electricians, plumbers, pipefitters, painters, ironworkers, sheet metal workers, roofers, and tile, marble and terrazzo workers.

"The amount of people working throughout the CSO project makes this partnership especially important," said Kalinowski. "There are many hazards in any construction project, especially with people coming and going over a 30-month period. Our partnership group will be proactive and relentless in its combined mission to reduce worker injuries and illnesses."

Partnering for Zero Injuries

The Greater Detroit Building Trades and Construction Trades Council and its affiliate unions are supportive of this partnership. The **partnering unions** include: Asbestos Workers Local 25; Bricklayers Local 1; Boilermakers Local 169; Carpenters Local 687; Cement Masons Local 514; I.B.E.W. Local 58; Ironworkers Local 25; Laborers Local 334; Laborers Local 1076; Laborers Local 1191; Michigan Regional Council of Carpenters; Operating Engineers Local 324; Painters D.C.; Pipefitters Local 636; Plumbers Local 98; Roofers Local 149; Sheet Metal Local 80; Sprinkler Fitters Local 704; Teamsters Local 247; and Tile, Marble & Terrazzo Local 32.

The **partnering employers** include: Brinker Company, L. S.; Canon; Christen Detroit; Cleveland Tram and Rail; Dan's Excavating, Inc.; De-Cal, Inc. Mechanical Contractors; Detroit Door & Hardware Company; Detroit Industrial Services; Doetsch Industrial Services, Inc.; E. C. Korneffel Company; Farnell Equipment Company; Hamlett Environmental Conservatec; Hollowcore, Inc.; Nagel Paving Company; Nicholson Construction Company; Rosati Masonry Company, Inc.; Rotor Electric Company; Titus Welding Company; W.P.M., Inc.; Walbridge Concrete Services; and Western Waterproofing Company.

The **City of Dearborn** is a supporting partner of this agreement, and has pledged its support for the critical emphasis in this project on worker safety and health. "This partnership is a wonderful example of a cooperative effort benefiting all parties," said Dearborn Mayor Michael A. Guido. The other supporting partners include **NTH Consultants, LTD; the Michigan Department of Environmental Quality;** and **Wade-Trim**.

The partnership does not preclude MIOSHA from enforcing its mission of addressing complaints, fatalities, or serious accidents, nor does it infringe on the rights of employees to report workplace hazards.

Headquartered in downtown Detroit, Walbridge Aldinger employs a professional staff of more than 600, with offices located in Aurora, IL; Charlotte, NC; Kokomo, IN; Georgetown, KY; Quad Cities, IA; Tampa, FL.; Windsor, Ont.; Mexico City, Mexico; Sinaia and Bucharest, Romania; and soon to be established, Shanghai, China. The company provides a complete range of program management and design build services in all market segments of the construction industry. Walbridge also owns and operates Mefin Sinaia S.A., a diesel fuel injection manufacturing business in Romania with 1300 employees. Visit http://www.walbridge.com/ or http://www.mefinsinaia.ro/ for additional information. ■

More than 40 subcontractors and labor groups signed the historic Walbridge Aldinger/MIOSHA partnership–with the goal of zero injuries for workers on a large and complex construction project.

Lockout Case Studies

Cont. from Page 5

Case 2: Dry Cleaning Operator Sustains Severe Head Injury

The accident occurred behind a laundry press used for sheets and pants. The 6-year employee was a laundry press operator who was cleaning lint from and servicing the press from the backside of the machine. Another employee activated the press. The injured employee was bent over the machine and was caught in a pinch point either between a moving machine cylinder/arm and the stationary frame of a dry cleaning machine or moving and stationary parts of the laundry press. The employee's skull was severely fractured.

Analysis

This two-location dry cleaning and laundry business with 19 total employees had no previous MIOSHA inspection history. Cleaning and servicing machines was part of the employee's regular job. The employer did not have a lockout program nor had training been provided to employees. The employer was cited for lack of an energy control program including lack of training with a proposed penalty of $400. The $2,000 gravity based penalty was reduced 60 percent based on the number of employees and 10 percent for no previous MIOSHA history. An additional 10 percent reduction was applied for safety and health efforts including some safety training, employee participation, conducting in-house inspections and medical management. The employer also received two citations with a total penalty of $200 for failing to log the injury within the allotted time and lack of a MIOSHA poster. The employer did not appeal the citation.

Action

A follow-up inspection was conducted by MIOSHA to ensure compliance, as abatement was not received from the employer as requested. Based on a review of documentation and employee interviews during the follow-up, it was determined that abatement had been achieved. The employer paid the $600 total penalty.

Case 3: Forging Technician's Hand Broken

This 6-year employee was having problems with a "finger" of a 1600-ton mechanical power press, which walks the part through the dies. The press had light curtains and pull-down barrier guards for running the press in automatic. The employee stated he called maintenance to make repairs, but maintenance was backed up so he assessed the problem himself. He determined the wiring sensor box had become wet with water. He repaired the sensor box, but the wires were hanging down so he attempted to put a clamp on the wires to hold them out of the way. The employee was holding the wiring and when he reached around to the control panel to press the inch button, the finger arm caught his hand between the fingers and machine housing crushing his left hand.

Analysis

This 325-employee press plant manufacturers automotive parts. The facility has previous MIOSHA history, most recently a planned comprehensive inspection in 2001. During the planned inspection, only one "other-than-serious" lockout violation was noted related to annual lockout inspections. Employees interviewed referenced ongoing problems with the feed monitors similar to that experienced by the injured employee. Employees knew about lockout, had locks and could describe the process for locking out the press. However, they indicated that lockout is not always followed for these types of problems, nor are individual locks always used when more than one person works on a press.

The employer was cited for not enforcing the use of lockout when employees perform work inside the press, such as making repairs, with a $2,975 penalty. Inadequate training was cited with a $1,700 penalty. In addition, citations were issued for inadequate point of operation guarding on the press where the accident occurred under Part 1, General Provisions, Rule 34(3) with a penalty of $1,700; and for failing to provide and requiring the use of a prop or block for the forging hammer when making repairs to the die inside the press, also with a penalty of $1,700. The total initial assessed penalties were $8,075. The gravity based penalties before reduction were $3,500 for inadequate lockout training and $2,000 for the remaining violations. The employer received a 15 percent penalty reduction for their safety and health program efforts. The employer did not qualify for a size or history reduction.

Action

The employer accepted the citations in a settlement agreement that reduced the total penalties to $4,037.50 and agreed to abate the hazards and conditions. The employer provided die blocks for use during finger adjustments and die changes, and trained employees in their use. The employer also reviewed their energy control procedure with both authorized and affected employees in the forging area. Refresher training was also provided on the use of die blocks, lockout policy and die changes for all employees in the forging area.

The employer provided training to authorized employees on the recognition of applicable hazardous energy sources, the type of magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control to address the issue of employees only turning the motor off. Authorized employees also received instruction on MIOSHA General Industry Part 85, Control of Hazardous Energy Sources, and were issued locks for use during die changes. Training included hands-on training on lockout techniques and the possible hazards involved with the type of operation being addressed. Affected employees received training on energy isolation from their in-house electrician.

The employer created an authorized employee form, stating the training provided, the date, and a statement of the equipment for which the employee is authorized. The firm was proactive in including a commitment to provide refresher training on a bi-annual basis.

Proactive Lockout Protection

Each of the employers above adequately addressed the lockout issues that resulted in employee injury in their workplaces and received a letter from MIOSHA thanking them for their cooperation and efforts to create and maintain a safe and healthful workplace.

The summer issue of the MIOSHA News will include more detailed information on events and ideas for re-emphasizing workplace safety and health during this milestone anniversary year. However, it is not necessary to wait for that invitation to be proactive. Employers are encouraged to make full compliance with lockout a priority this year.

As Case Study 3 illustrates, often times employers have done the right thing and have established a program and provided initial training and equipment. However, ongoing management commitment and leadership is critical to ensure continuing success.

MIOSHA Part 85, Control of Hazardous Energy Sources, is a performance-based standard that allows the employer to create a program that works best for their workplace, as long as the basic provisions of the rule are met. Employers must plan for control of energy by doing all of the following:

- Establish an energy control program.
- Develop, document and utilize lockout/tagout procedures.
- Provide employees with appropriate training.
- Provide, at no cost to employees, equipment required by the lockout/tagout procedures.
- Ensure continued competency through inspections and retraining.

These requirements apply to servicing and maintenance of machines, equipment and associated activities. The provisions are not intended to be applied during normal production operations, unless servicing and/or maintenance are performed during normal production.

Assistance in establishing or strengthening your company lockout-tagout program is available by contacting the CET Division at 517.322.1809. An excellent resource guide, the ***Lockout/Tagout Compliance Guide, SP-27***, is also available. You may wish to refer to the following articles which are available on-line from previous editions of the MIOSHA News: *Lock It Out- Every Time*, Summer 2001; *Minor Tool Changes and Adjustments: Is Lockout Required*, Fall 2002; *Lockout-Tagout: Not Just for Manufacturing Workplaces*, Spring 2003. ■

Accident Investigation

Cont. from Page 4

training; then implement those measures. However, it is important to be impartial, objective and open to nuances in the workplace that normally would not be considered. It is important to involve all levels of employees in accident, incident and near miss investigations. Peers, supervisors, management all bring different facts and perspectives to a systematic inquiry.

A typical accident investigation often starts and ends with the obvious. For example, an employee injured their back when they fell as they failed to notice the slippery floor. Solution: The employee failed to clean the floor and "needs to be more careful." How many times have safety directors seen that particular recommendation? A more lasting solution requires an in-depth investigation–a closer look at what else could be affecting the system failure.

The most important question then becomes "why." Why did this person fall? Why was the floor slippery? Why is oil leaking in this area? Why didn't someone clean up the area? Why are procedures not in place to deal with the leak? Why has the equipment or process not been examined?

By continuing to ask "why," underlying causes will emerge that may not be so obvious. Is there a hold on expenditures which impacts replacing the piping system where the leak originated? Who determined where the cost cutting would take place? What did this accident really cost the organization and what does it tell our employees about our attention to safety? When we fail to look at all causes and address every contributing factor–we are doomed to repeat our mistakes. The result: A higher price to pay in terms of human suffering as well as lowered productivity and profitability.

An organization's actions are not a straight line of cause and effect. All organizations are an intriguing mix of attitudes and beliefs, design elements, products, activities and results. Experience has proven that a small change at one end of a process can create a large and unknown effect on the other end.

Consequently, truly effective accident investigation should be an open process where all ideas have merit and lasting positive change becomes possible. If we take the time in the beginning to evaluate all of the relationships in a process or action–we are further down the road to eliminating unwanted and potentially disastrous results.

The Consultation Education and Training (CET) Division has consultants available to provide outreach services for the many diverse industries in Michigan. CET consultants can provide employers assistance in creating safety and health management systems, developing accident investigation techniques, and implementing long-term solutions. CET services are free–and available statewide. Contact the CET Division today at 517.322.1809. ■

Emergency Responders

Cont. from Page 8

the trench, because additional weight at the edge of the excavation could cause additional cave-in. Keeping operating equipment as far back from the edge of the excavation as possible was also advised. Vibrating equipment can also disturb the ground resulting in further collapse.

- During the rescue, the rescue workers had spread 4'X 8' sheets of plywood along the edges of the excavation for rescue personnel to work on. This plywood could cover cracks in the earth that indicate a section of earth that could further collapse into the excavation onto rescue workers. The plywood was lifted to inspect for cracks, and cracks were discovered in one area. The plywood was pulled back in that area and the cracks were spray painted orange to indicate a potentially hazardous area that should not be walked upon.
- Reinforced plywood sheets were used for shoring the trench to prevent additional cave-in, using tie-back ropes to raise and lower the sheets into place. Support jacks were installed horizontally in the trench to hold the plywood support panels in place, ropes were used to raise and lower the supports. MIOSHA recommended that the number of personnel in the shoring area be restricted to the minimum number necessary to the ongoing rescue operation. The existence of the tie-back ropes created a trip hazard to be considered, and could be obscured by placement of lighting and equipment.
- Employees using ladders to retrieve the plywood shoring and support equipment should be completely removed from the excavation prior to the last support being removed. The allowance of not more than four feet below the top of the excavation should be reevaluated, because an employee could still be knocked off the ladder due to a cave-in, even though they were close to the top of the excavation.
- Employees should not be exposed to the possible cave-in of unsupported walls after support jacks have been removed. After the support jacks have been removed, retrieval of emergency support material and equipment should be accomplished in a manner that does not expose employees to a cave-in hazard. The necessity of multiple employees hand pulling up the heavy shoring material could be eliminated by the use of mobile equipment or other mechanical means.

The MIOSHA response discussed above is an excellent example of how the principles of the new MEMP instruction can be used to have a positive impact during an emergency response. Our primary goal is to do what we can to ensure that the number one rule of emergency response is not violated, i.e. " Do not make more victims." The MEMP instruction can be viewed on our website at www.michigan.gov/mioshapolicies. Click on "Search of Instructions" and type in emergency management plan. ■

Workplace Violence

Cont. from Page 9

To manage a potentially violent situation, your choices may include:

- Offering coaching to the employee,
- A referral for counseling,
- Progressive discipline,
- Conflict resolution sessions with involved parties,
- Termination from the organization.

If a problem exists with a vendor or contractor, the best thing to do is to call their company and report that the employee's behavior or conduct is inappropriate, and you want this individual removed from your workplace.

Action Plan

The OSHA General Duty Clause requires that employers maintain a workplace that is free from recognized hazards that can cause serious injury or death to employees. This not only refers to traditional hazards that can cause harm, such as stamping machines or toxic chemicals, but can also be expanded to address "people hazards"–those individuals that threaten harm or death to others or act in intimidating ways.

No matter how small or large your organization is, the responsible employer will both implement and maintain a violence prevention program. They will:

- Develop a violence prevention policy,
- Train employees and supervisors to recognize possible violations of the policy,
- Develop procedures to report threats,
- Create an infrastructure and resources to respond to threats, and
- Diffuse potentially volatile situations.

Maintaining an effective violence prevention program will save your company money, provide a safe workplace environment for your workers and customers, and allow them to take care of business without worrying about threats of harm. So while the name of the program is "Violence Prevention," the real message you give to your employees and customers, is that your company values human life. ■

New Video Available

Workplace Violence Prevention

The authors have helped many Michigan employers develop workplace violence prevention systems.

They have just produced an instructional video, funded by MIOSHA, entitled " ***Workplace Violence Prevention: Implementing Your Program***."

The video is available from the MIOSHA CET Division at 517.322.1809.

How To Contact MIOSHA

MIOSHA Hotline	**800.866.4674**
Fatality/Catastrophe Hotline	**800.858.0397**
General Information	**517.322.1814**
Free Safety/Health Consultation	**517.322.1809**

Director	**517.322.1814**	**Doug Kalinowski**
Deputy Director	**517.322.1817**	**Martha Yoder**

DIVISION	PHONE	DIRECTOR
Appeals	517.322.1297	Vacant
Construction Safety & Health	517.322.1856	Bob Pawlowski
Consultation Education & Training	517.322.1809	Connie O'Neill
General Industry Safety & Health	517.322.1831	John Brennan
Management & Technical Services	517.322.1851	John Peck

OFFICE	PHONE	MANAGER
Asbestos Program	517.322.1320	George Howard
CET Grant Program	517.322.1865	Vacant
Employee Discrimination Section	248.888.8777	Jim Brogan
MIOSHA Information Systems Section	517.322.1851	Bob Clark
Standards Section	517.322.1845	Marsha Parrott-Boyle

Website: www.michigan.gov/miosha

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MI SHA news

Michigan Occupational Safety and Health Administration
Director: Douglas J. Kalinowski

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